

Appl. No. : 09/747,002
Filed : December 22, 2000

AMENDMENTS TO THE CLAIMS

Please cancel Claims 1-16 without prejudice.

Please add new Claims 17-29.

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[deletion]]):

1.-16. (Cancelled)

17. (New) A method of storing a video data stream on a hard disk drive (HDD) for efficient, non-sequential access to the stored stream of video data, the HDD having a plurality of sectors, each sector having a first integer of user data bytes, the HDD addressable on sector boundaries for non-sequential access, the video data stream including a sequence of original transport packets, each original transport packet having a second integer of bytes, the second integer of bytes different from the first integer of user data bytes, wherein a third integer of original transport packets are storable in a fourth integer of sectors, the fourth integer being a minimum number of sectors with the same number of user data bytes as the number of bytes in the third integer of original transport packets, the method comprising:

receiving the sequence of original transport packets;

adding a fifth integer of bytes to each original transport packet to create a sequence of modified transport packets, each modified transport packet having a sixth integer of bytes; and

storing the sequence of modified transport packets on the HDD, wherein a seventh integer of modified transport packets are stored in an eighth integer of sectors, the eighth integer being a minimum number of sectors with the same number of user data bytes as the number of bytes in the seventh integer of modified transport packets, the eighth integer of sectors smaller than the fourth integer of sectors.

18. (New) The method of Claim 17, wherein the second integer of bytes is 188.

19. (New) The method of Claim 18, wherein the fifth integer of bytes is four so that the sixth integer of bytes is 192.

20. (New) The method of Claim 17, wherein the second integer of bytes is 188 and wherein the fifth integer of bytes is four so that each modified transport packet has a length of 192 bytes.

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21. (New) The method of Claim 20, wherein the first integer of user data bytes is 512, and wherein the eighth integer of sectors is three.

22. (New) The method of Claim 17, wherein the first integer of user data bytes is 512.

23. (New) The method of Claim 17, wherein each original transport packet includes synchronization bytes located at a beginning of each original transport packet, and wherein the fifth integer of bytes is added in front of the synchronization bytes.

24. (New) The method of Claim 17, wherein each original transport packet includes synchronization bytes located at a beginning of each original transport packet, and wherein the fifth integer of bytes is inserted behind the synchronization bytes.

25. (New) The method of Claim 17, further comprising passing each modified transport packet through a first buffer prior to storing on the HDD.

26. (New) A system for storing video data for efficient, non-sequential access to the stored video data, the system comprising:

a receiver configured to receive a stream of video data that includes a sequence of original transport packets, wherein each original transport packet has a first predetermined number of bytes;

a first circuit configured to add a second predetermined number of bytes to each original transport packet to create a modified transport packet having a third predetermined number of bytes; and

a hard disk drive (HDD) configured to receive and store each modified transport packet, wherein the HDD is addressable on sector boundaries, each sector having a predetermined number of user data bytes different from the first predetermined number of bytes, wherein:

the first byte in an original transport packet aligns with a first user data byte in a sector after a first predetermined number of sectors following a previous alignment; and

the first byte in a modified transport packet aligns with a first user data byte in a sector after a second predetermined number of sectors following a previous alignment, wherein the second predetermined number of sectors is less than the first predetermined number of sectors.

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27. (New) The system of Claim 26, further comprising a second circuit configured to remove the second predetermined number of bytes from each modified transport packet retrieved from the HDD.

28. (New) The system of Claim 26, wherein the first predetermined number of bytes is 188 and wherein the second predetermined number of bytes is four so that the third number of bytes is 192 bytes.

29. (New) The system of Claim 28, wherein the predetermined number of user data bytes is 512, and wherein the second predetermined number of sectors is three.